General

Guideline Title

Guidelines for the provision and assessment of nutrition support therapy in the pediatric critically ill patient: Society of Critical Care Medicine and American Society for Parenteral and Enteral Nutrition.

Bibliographic Source(s)

Mehta NM, Skillman HE, Irving SY, Coss-Bu JA, Vermilyea S, Farrington EA, McKeever L, Hall AM, Goday PS, Braunschweig C. Guidelines for the provision and assessment of nutrition support therapy in the pediatric critically ill patient: Society of Critical Care Medicine and American Society for Parenteral and Enteral Nutrition. JPEN J Parenter Enteral Nutr. 2017 Jul;41(5):706-42. [104 references] PubMed

Guideline Status

This is the current release of the guideline.

This guideline updates a previous version: Mehta NM, Compher C, American Society for Parenteral and Enteral Nutrition Board of Directors. A.S.P.E.N. clinical guidelines: nutrition support of the critically ill child. JPEN J Parenter Enteral Nutr. 2009 May-Jun;33(3):260-76. [65 references]

This meets NGC's 2013 (revised) inclusion criteria.

NEATS Assessment

National Guideline Clearinghouse (NGC) has assessed this guideline's adherence to standards of trustworthiness, derived from the Institute of Medicine's report Clinical Practice Guidelines We Can Trust.

= Poor = Fair = Good = Very Good = Excellent

Assessment	Standard of Trustworthiness
NO	Disclosure of Guideline Funding Source
	Disclosure and Management of Financial Conflict of Interests

	Guideline Development Group Composition
YES	Multidisciplinary Group
YES	Methodologist Involvement
▮▯▯▯▯	Patient and Public Perspectives
	Use of a Systematic Review of Evidence
▮▮▮▮▮	Search Strategy
▮▮▮▮▮	Study Selection
▮▮▮▮▮	Synthesis of Evidence
	Evidence Foundations for and Rating Strength of Recommendations
▮▮▮▮▮	Grading the Quality or Strength of Evidence
▮▮▮▮▮	Benefits and Harms of Recommendations
▮▮▮▮▮	Evidence Summary Supporting Recommendations
▮▮▮▮▯	Rating the Strength of Recommendations
▮▮▮▮▮	Specific and Unambiguous Articulation of Recommendations
▮▯▯▯▯	External Review
▮▯▯▯▯	Updating

Recommendations

Major Recommendations

Definitions for the grading of recommendations (Strong, Weak, Further research needed) and quality of evidence (High, Moderate, Low, Very Low) are provided at the end of the "Major Recommendations" field.

What is the impact of nutrition status on outcomes in critically ill children?

Based on observational studies, malnutrition, including obesity, is associated with adverse clinical outcomes, including longer periods of ventilation, higher risk of hospital-acquired infection, longer pediatric intensive care unit (PICU) and hospital stay, and increased mortality. The authors recommend that patients in the PICU undergo detailed nutrition assessment within 48 hours of admission. Furthermore, as patients are at risk of nutrition deterioration during hospitalization, which can adversely affect clinical outcomes, the authors suggest that the nutrition status of patients be reevaluated at least weekly throughout hospitalization.

Quality of Evidence: Very low
GRADE Recommendation: Strong

What are the best practices to screen and identify patients with malnutrition or those at risk of nutrition

deterioration in the PICU?

On the basis of observational studies and expert consensus, the authors recommend that weight and height/length be measured on admission to the PICU and that z scores for body mass index for age (weight for length <2 years) or weight for age (if accurate height is not available) be used to screen for patients at extremes of these values. In children <36 months old, head circumference must be documented. Validated screening methods for the PICU population to identify patients at risk of malnutrition must be developed. Screening methods might allow limited resources to be directed to high-risk patients who are most likely to benefit from early nutrition assessment and interventions.

Quality of Evidence: Very low
GRADE Recommendation: Strong

What is the recommended energy requirement for critically ill children?

On the basis of observational cohort studies, the authors suggest that measured energy expenditure by indirect calorimetry (IC) be used to determine energy requirements and guide prescription of the daily energy goal.

Quality of Evidence: Low
GRADE Recommendation: Weak

How should energy requirement be determined in the absence of IC?

If IC measurement of resting energy expenditure is not feasible, the authors suggest that the Schofield or Food Agriculture Organization/World Health Organization/United Nations University equations may be used without the addition of stress factors to estimate energy expenditure. Multiple cohort studies have demonstrated that most published predictive equations are inaccurate and lead to unintended overfeeding or underfeeding. The Harris-Benedict equations and the recommended daily allowances (RDAs), which are suggested by the dietary reference intakes, should not be used to determine energy requirements in critically ill children.

Quality of Evidence: Very Low
GRADE Recommendation: Weak

What is the target energy intake in critically ill children?

On the basis of observational cohort studies, the authors suggest achieving delivery of at least two-thirds of the prescribed daily energy requirement by the end of the first week in the PICU. Cumulative energy deficits during the first week of critical illness may be associated with poor clinical and nutrition outcomes. On the basis of expert consensus, the authors suggest attentiveness to individualized energy requirements, timely initiation and attainment of energy targets, and energy balance to prevent unintended cumulative caloric deficit or excesses.

Quality of Evidence: Low
GRADE Recommendation: Weak

What is the minimum recommended protein requirement for critically ill children?

On the basis of evidence from randomized controlled trials (RCTs) and as supported by observational cohort studies, the authors recommend a minimum protein intake of 1.5 g/kg/d. Protein intake higher than this threshold has been shown to prevent cumulative negative protein balance in RCTs. In critically ill infants and young children, the optimal protein intake required to attain a positive protein balance may be much higher than this minimum threshold. Negative protein balance may result in loss of lean muscle mass, which has been associated with poor outcomes in critically ill patients. Based on a large observational study, higher protein intake may be associated with lower 60-day mortality in mechanically ventilated children.

Quality of Evidence: Moderate
GRADE Recommendation: Strong

What is the optimal protein delivery strategy in the PICU?

On the basis of results of randomized trials, the authors suggest provision of protein early in the course of critical illness to attain protein delivery goals and promote positive nitrogen balance. Delivery of a higher proportion of the protein goal has been associated with positive clinical outcomes in observational studies.

Quality of Evidence: Moderate
GRADE Recommendation: Weak

How should protein delivery goals be determined in critically ill children?

The optimal protein dose associated with improved clinical outcomes is not known. The authors do not recommend the use of RDA values to guide protein prescription in critically ill children. These values were developed for healthy children and often underestimate the protein needs during critical illness.

Quality of Evidence: Moderate
GRADE Recommendation: Strong

Is enteral nutrition (EN) feasible in critically ill children?

On the basis of observational studies, the authors recommend EN as the preferred mode of nutrient delivery to the critically ill child. Observational studies support the feasibility of EN, which can be safely delivered to critically ill children with medical and surgical diagnoses and to those receiving vasoactive medications. Common barriers to EN in the PICU include delayed initiation, interruptions due to perceived intolerance, and prolonged fasting around procedures. On the basis of observational studies, the authors suggest that interruptions to EN be minimized in an effort to achieve nutrient delivery goals by the enteral route.

Quality of Evidence: Low
GRADE Recommendation: Strong

What is the benefit of EN in this group?

Although the optimal dose of macronutrients is unclear, some amount of nutrient delivered as EN has been beneficial for gastrointestinal mucosal integrity and motility. Based on large cohort studies, early initiation of EN (within 24–48 hours of PICU admission) and achievement of up to two-thirds of the nutrient goal in the first week of critical illness have been associated with improved clinical outcomes.

Quality of Evidence: Low
GRADE Recommendation: Weak

What is the optimum method for advancing EN in the PICU population?

On the basis of observational studies, the authors suggest the use of a stepwise algorithmic approach to advance EN in children admitted to the PICU. The stepwise algorithm must include bedside support to guide the detection and management of EN intolerance and the optimal rate of increase in EN delivery.

Quality of Evidence: Low
GRADE Recommendation: Weak

What is the role of a nutrition support team or a dedicated dietitian in optimizing nutrition therapy?

On the basis of observational studies, the authors suggest a nutrition support team, including a dedicated dietitian, be available on the PICU team, to facilitate timely nutrition assessment, and optimal nutrient delivery and adjustment to the patients.

Quality of Evidence: Low
GRADE Recommendation: Weak

What is the best site for EN delivery: gastric or small bowel?

Existing data are insufficient to make universal recommendations regarding the optimal site to deliver EN to critically ill children. On the basis of observational studies, the authors suggest that the gastric route be the preferred site for EN in patients in the PICU. The postpyloric or small intestinal site for EN may be used in patients unable to tolerate gastric feeding or those at high risk for aspiration. Existing data are insufficient to make recommendations regarding the use of continuous vs. intermittent gastric feeding.

Quality of Evidence: Low
GRADE Recommendation: Weak

When should EN be initiated?

On the basis of expert opinion, the authors suggest that EN be initiated in all critically ill children, unless it is contraindicated. Given observational studies, the authors suggest early initiation of EN, within the first 24 to 48 hours after admission to the PICU, in eligible patients. The authors suggest the use of institutional EN guidelines and stepwise algorithms that include criteria for eligibility for EN, timing of initiation, and rate of increase, as well as a guide to detecting and managing EN intolerance.

Quality of Evidence: Low
GRADE Recommendation: Weak

What is the indication for and optimal timing of parenteral nutrition (PN) in critically ill children?

On the basis of a single RCT, the authors do not recommend the initiation of PN within 24 hours of PICU admission.

Quality of Evidence: Moderate
GRADE Recommendation: Strong

What is the role of PN as a supplement to inadequate EN?

For children tolerating EN, the authors suggest stepwise advancement of nutrient delivery via the enteral route and delaying commencement of PN. Based on current evidence, the role of supplemental PN to reach a specific goal for energy delivery is not known. The time when PN should be initiated to supplement insufficient EN is also unknown. The threshold for and timing of PN initiation should be individualized. Based on a single RCT, supplemental PN should be delayed until 1 week after PICU admission for patients with normal baseline nutrition state and low risk of nutrition deterioration. On the basis of expert consensus, the authors suggest PN supplementation for children who are unable to receive any EN during the first week in the PICU. For patients who are severely malnourished or at risk of nutrition deterioration, PN may be supplemented in the first week if they are unable to advance past low volumes of EN.

Quality of Evidence: Low
GRADE Recommendation: Weak

What is the role of immunonutrition in critically ill children?

On the basis of available evidence, the authors do not recommend the use of immunonutrition in critically ill children.

Quality of Evidence: Moderate
GRADE Recommendation: Strong

Definitions

Note: The American Society for Parenteral and Enteral Nutrition (A.S.P.E.N.) clinical guidelines have adopted concepts of the Grading of Recommendations Assessment, Development and Evaluation (GRADE) working group. A full description of the methodology is outlined in "Clinical guidelines for the use of parenteral and enteral nutrition in adult and pediatric patients: applying the GRADE system to

development of A.S.P.E.N. clinical guidelines" (see the "Availability of Companion Documents" field).

Quality of Evidence and Definitions

High	Further research is very unlikely to change confidence in the estimate of effect.
Moderate	Further research is likely to have an important impact on confidence in the estimate of effect and may change the estimate.
Low	Further research is very likely to have an important impact on confidence in the estimate of effect and is likely to change the estimate.
Very Low	Any estimate of effect is very uncertain.

Strength of Recommendation

Strong	Net benefits outweigh harms
Weak	Tradeoffs for patient are important
Further research needed	Uncertain tradeoffs

Clinical Algorithm(s)

None provided

Scope

Disease/Condition(s)

Critical illness requiring hospitalization in the pediatric intensive care unit (PICU)

Guideline Category

Evaluation

Management

Prevention

Risk Assessment

Screening

Treatment

Clinical Specialty

Critical Care

Nursing

Nutrition

Pediatrics

Intended Users

Advanced Practice Nurses

Dietitians

Hospitals

Nurses

Pharmacists

Physician Assistants

Physicians

Guideline Objective(s)

To describe best practices in nutrition therapy for critically ill children

Target Population

The pediatric critically ill patient (>1 month and <18 years) expected to require a length of stay (LOS) >2–3 days in a pediatric intensive care unit (PICU) admitting medical, surgical, and cardiac patients

Note: These guidelines are not intended for neonates or adult patients. These guidelines are not intended for patients with specific diagnoses, such as burn injuries. These guidelines are directed toward generalized patient populations, but, like any other management strategy in the PICU, nutrition therapy should be tailored to the individual patient.

Interventions and Practices Considered

Assessment/Diagnosis

Detailed nutrition assessment
Weight, height/length, and body mass index (BMI) measurements
Assessment of energy expenditure (indirect calorimetry [IC], Schofield or Food Agriculture Organization/World Health Organization [WHO]/United Nations University equations)

Management

Attentiveness to individualized energy requirements, timely initiation and attainment of energy targets, and energy balance
Early initiation of enteral nutrition (EN) (gastric route)
Stepwise algorithmic approach to advance EN
Delayed parenteral nutrition (PN)
Multidisciplinary nutrition support team, including a dedicated dietitian
Minimum protein intake
Re-evaluation of nutrition status and nutrient adjustment

Note: Initiation of PN within 24 hours of pediatric intensive care unit (PICU) admission and immunonutrition were considered but not recommended.

Major Outcomes Considered

- Nutritional status
- Energy expenditure
- Energy balance
- Periods of ventilation

- Hospital-acquired infections
- Infectious complications
- Pediatric intensive care unit (PICU) length of stay (LOS)
- Hospital LOS
- Mortality

Methodology

Methods Used to Collect/Select the Evidence

Searches of Electronic Databases

Description of Methods Used to Collect/Select the Evidence

A rigorous search of the MEDLINE/PubMed and EMBASE databases was performed spanning January 1995 through March 2016 for citations relevant to nutrition support in the critically ill pediatric population with the techniques outlined in a recent publication. For the MEDLINE portion of the search, Medical Subject Heading (MeSH) folders for "critical illness," "intensive care," and "critical care" were searched for relevant citations. To meet the search criteria, these citations also had to be indexed in MeSH folders for "nutritional support," "malnutrition," "nutrition assessment," "energy intake," "energy metabolism," or "dietary proteins." To further restrict citations to the chosen population, the terms were cross-referenced in the MeSH folders for "*pediatrics*," "*infant*," "*child*," "*adolescent*," or "*young adult*." Alternatively, the authors accepted citations that had the terms pediatric*, paediatric*, infan*, adolescen*, or child* in at least 1 of their PubMed/MEDLINE subject fields. Finally, all citations had to be cross-referenced in the "humans" MeSH folder. The PubMed (non-MEDLINE) database was then searched with text-based terms (see Figure 1 in the original guideline document). As an added protection against MeSH miscategorization of citations, this text-based search was then used to search the MEDLINE database, restricted to yield only citations carrying those terms in their title or abstract. For the clinical trials search, the MEDLINE portion was restricted to those citations categorized according to the publication type "clinical trials." For the cohort search, the MEDLINE portion was restricted to those studies cross-referenced in the "cohort" MeSH folder, whereas the text-based portion was restricted to only those citations that were not indexed according to the publication types "clinical trial," "review," "case reports," or "commentary." An analogous search strategy focusing on EMBASE-indexed non-MEDLINE clinical trials was created and implemented for the EMBASE database.

The literature search was performed according to the terms listed in Figure 1 of the original guideline document. The reviewers received a list containing the title, abstract, and authors of all citations that met the search criteria. The reviewers scanned the titles and abstracts. To be included, the citation had to be a randomized clinical trial, meta-analysis, or cohort study. The target population had to be critically ill human children (>1 month but <18 years old) and the intervention or exposure studied had to include parenteral nutrition, enteral nutrition, or nutrition screening. If after reading the title and abstract, the potential for the article to meet these criteria remained, the article was downloaded for further investigation. To be included, the article had to also contain outcome data that could answer one or more of the 8 patient, intervention, comparator, outcome (PICO) questions. Relevant outcome data considered was hospital mortality, intensive care unit (ICU) or hospital length of stay, nosocomial complications, and time on mechanical ventilation. If all these criteria were met, the data was abstracted from the article, analyzed, and included in the guidelines. If they were not met, the article was excluded.

In total, 2032 citations were scanned for relevance. The PubMed/MEDLINE search resulted in 960 citations for clinical trials and 925 citations for cohort studies. The EMBASE search for clinical trials culled 1661 citations. In total, the search for clinical trials yielded 1107 citations, whereas the cohort search yielded 925. Each citation was reviewed by at least 2 reviewers to examine eligibility for inclusion in guideline development.

Number of Source Documents

After careful review, 16 randomized controlled trials (RCTs) and 37 cohort studies appeared to answer 1 of the 8 preidentified question groups for this guideline.

Methods Used to Assess the Quality and Strength of the Evidence

Weighting According to a Rating Scheme (Scheme Given)

Rating Scheme for the Strength of the Evidence

Note: The American Society for Parenteral and Enteral Nutrition (A.S.P.E.N.) clinical guidelines have adopted concepts of the Grading of Recommendations Assessment, Development and Evaluation (GRADE) working group. A full description of the methodology is outlined in "Clinical guidelines for the use of parenteral and enteral nutrition in adult and pediatric patients: applying the GRADE system to development of A.S.P.E.N. clinical guidelines" (see the "Availability of Companion Documents" field).

Quality of Evidence and Definitions

High	Further research is very unlikely to change confidence in the estimate of effect.
Moderate	Further research is likely to have an important impact on confidence in the estimate of effect and may change the estimate.
Low	Further research is very likely to have an important impact on confidence in the estimate of effect and is likely to change the estimate.
Very Low	Any estimate of effect is very uncertain.

Methods Used to Analyze the Evidence

Review of Published Meta-Analyses

Systematic Review with Evidence Tables

Description of the Methods Used to Analyze the Evidence

Due to a dearth of well-designed randomized controlled trials (RCTs), many studies addressing these questions and relevant outcomes are either prospective or retrospective observational reports of clinical outcomes associated with a strategy. In some cases, these interventions were protocolized. The evidence provided by these observational studies was strengthened, however, when the effects shown were strong, when the sample size was large, or when there was a dose-response relationship. The authors used the Grading of Recommendations Assessment, Development and Evaluation (GRADE) criteria to adjust the evidence grade based on assessment of the quality of study design and execution (refer to Clinical guidelines for the use of parenteral and enteral nutrition in adult and pediatric patients: applying the GRADE system to development of A.S.P.E.N. clinical guidelines" [see the "Availability of Companion Documents" field]). The GRADE process distinctly separates the body of evidence from the recommendation statements. This separation enables incorporation of the weight of the risks versus the benefits that occur from adopting the recommendation. Thus, a recommendation may be "strong" despite comparatively weak published evidence if the net benefits outweigh the harms from its adoption. Recommendations based mainly on expert opinion were deemed weak.

The authors reviewed the studies and abstracted the relevant data with a standardized form. After review of the abstracted data, evidence tables were generated for each question. Tables 3 to 10 in the original

guideline document summarize the evidence in the form of trials and cohort studies related to each guideline question. Each table is accompanied by a discussion on the rationale for the recommendations and suggested areas for future investigation for the questions.

Methods Used to Formulate the Recommendations

Expert Consensus

Description of Methods Used to Formulate the Recommendations

The Grading of Recommendations Assessment, Development and Evaluation (GRADE) process was used to develop the key questions and to plan data acquisition and conflation for these guidelines. The task force of experts defined keywords to be used for the literature search; developed key questions that address major practice themes at the bedside; and determined the time frame for the literature search, target population, and the specific outcomes to be addressed. Ultimately, questions related to 8 major practice areas were developed, which were reviewed and approved by the American Society for Parenteral and Enteral Nutrition (A.S.P.E.N.) and the Society of Critical Care Medicine (SCCM) boards. Table 2 in the original guideline document describes the standard language and rationale for the grade assigned to a recommendation.

Given the evidence tables, the authors used an iterative process to develop practical recommendations for each question with the GRADE methodology where applicable and by consensus.

Rating Scheme for the Strength of the Recommendations

Note: The American Society for Parenteral and Enteral Nutrition (A.S.P.E.N.) clinical guidelines have adopted concepts of the Grading of Recommendations Assessment, Development and Evaluation (GRADE) working group. A full description of the methodology is outlined in "Clinical guidelines for the use of parenteral and enteral nutrition in adult and pediatric patients: applying the GRADE system to development of A.S.P.E.N. clinical guidelines" (see the "Availability of Companion Documents" field).

Strength of Recommendation

Strong	Net benefits outweigh harms
Weak	Tradeoffs for patient are important
Further research needed	Uncertain tradeoffs

Cost Analysis

A formal cost analysis was not performed and published cost analyses were not reviewed.

Method of Guideline Validation

Not stated

Description of Method of Guideline Validation

Not applicable

Evidence Supporting the Recommendations

Type of Evidence Supporting the Recommendations

The type of supporting evidence identified and graded for each recommendation (see the "Major Recommendations" field).

Benefits/Harms of Implementing the Guideline Recommendations

Potential Benefits

- The impact of nutrition status and nutrient delivery during critical illness has been demonstrated on clinical outcomes such as mortality, infectious complications, and length of stay (LOS).
- A uniform approach to define pediatric malnutrition may allow determination of thresholds for interventions aimed at ameliorating nutrition deterioration.
- A nutrition-focused physical examination in this cohort allows for determination of individualized nutrient needs, interventions, and monitoring to optimize nutrient intake during illness.
- Due to the consistent associations with LOS, duration of mechanical ventilation, and mortality, body mass index (BMI) *z* scores may be useful to screen for patients at risk of poor outcomes in the pediatric intensive care unit (PICU).
- Intake of > two-thirds of estimated energy goal in a large multicenter prospective cohort and >80% of estimated energy goal in a smaller single-center retrospective cohort was significantly associated with reduced mortality in critically ill children receiving mechanical ventilation.
- Higher protein doses were associated with positive nitrogen balance, a surrogate for protein balance.
- Based on large cohort studies, early initiation of enteral nutrition (EN) (within 24–48 hours of PICU admission) and achievement of up to two-thirds of the nutrient goal in the first week of critical illness have been associated with improved clinical outcomes.
- The use of feeding protocols is considered safe and, in individual centers, has been effective in optimizing nutrient delivery without increasing the risk of other complications.
- The use of EN algorithms/protocols has been associated with decreased time to initiation of EN, increased EN delivery and decreased reliance on parenteral nutrition (PN), and increased likelihood of achieving nutrient delivery goals.
- Cohort studies of children admitted to the PICU have reported improved survival with optimal nutrient intake by the enteral route.

Refer to the "Rationale" sections of the original guideline document for benefits associated with specific interventions.

Potential Harms

- Stress factors must be used selectively with caution, as their routine use might result in unintended overfeeding.
- The safety of protein intake >3 g/kg/d in children >1 month old has not been adequately demonstrated and may be associated with increased blood urea nitrogen.
- The provision of enteral nutrition (EN) into the small bowel requires the placement of a feeding tube past the pylorus. This can be accomplished by several methods but requires time and expertise and incurs higher costs. In a single-center study, mechanical problems with postpyloric tubes led to frequent EN interruptions and failure to achieve delivery of goal nutrients.

Refer to the "Rationale" sections of the original guideline document for harms associated with specific

interventions.

Qualifying Statements

Qualifying Statements

Qualifying Statements

Guideline Limitations

These American Society for Parenteral and Enteral Nutrition (ASPEN) — Society of Critical Care Medicine (SCCM) clinical guidelines are based on general consensus among a group of professionals who, in developing such guidelines, have examined the available literature on the subject and balanced potential benefits of nutrition practices against risks inherent with such therapies. A task force of multidisciplinary experts in clinical nutrition—representing physicians, nurses, pharmacists, dietitians, and statisticians— was jointly convened by the 2 societies. These individuals participated in the development of the guidelines and authored this document. These practice guidelines are not intended as absolute policy statements. Use of these practice guidelines does not in any way guarantee any specific benefit in outcome or survival. The professional judgment of the attending health professionals is the primary component of quality medical care delivery. Since guidelines cannot account for every variation in circumstances, practitioners must always exercise professional judgment when applying these recommendations to individual patients. These clinical guidelines are intended to supplement, but not replace, professional training and judgment.
The current guidelines represent an expanded body of literature since the publication of the first guidelines in 2009. The guidelines offer basic recommendations that are supported by review and analysis of the current literature and a blend of expert opinion and clinical practicality. Current literature has limitations that include variability in study design, small sample size, patient heterogeneity, variability in disease severity, lack of information on baseline nutrition status, and insufficient statistical power for analysis. The authors of these guidelines acknowledge the scarcity of high-level evidence for nutrition practices in the pediatric intensive care unit (PICU) environment. Most questions addressed in this guideline do not have enough homogeneous high-quality trials and therefore do not lend themselves to any statistical analyses. A combination of cohort studies and trials, where available, has been summarized and used to develop practical recommendations by consensus. Where randomized controlled trials (RCTs) were not available, observational studies formed the main evidence.

Implementation of the Guideline

Description of Implementation Strategy

An implementation strategy was not provided.

Institute of Medicine (IOM) National Healthcare Quality Report Categories

IOM Care Need

Getting Better

IOM Domain

Effectiveness

Safety

Identifying Information and Availability

Bibliographic Source(s)

Mehta NM, Skillman HE, Irving SY, Coss-Bu JA, Vermilyea S, Farrington EA, McKeever L, Hall AM, Goday PS, Braunschweig C. Guidelines for the provision and assessment of nutrition support therapy in the pediatric critically ill patient: Society of Critical Care Medicine and American Society for Parenteral and Enteral Nutrition. JPEN J Parenter Enteral Nutr. 2017 Jul;41(5):706-42. [104 references] PubMed

Adaptation

Not applicable: The guideline was not adapted from another source.

Date Released

2017 Jul

Guideline Developer(s)

American Society for Parenteral and Enteral Nutrition - Professional Association

Society of Critical Care Medicine - Professional Association

Source(s) of Funding

There was no funding or contribution from industry, nor were any industry representatives present at any of the committee meetings.

Guideline Committee

Not stated

Composition of Group That Authored the Guideline

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Financial Disclosures/Conflicts of Interest

All authors completed both the American Society for Parenteral and Enteral Nutrition (A.S.P.E.N) and Society of Critical Care Medicine (SCCM) conflicts-of-interest form for copyright assignment and financial disclosure. The authors of these guidelines have reported all potential conflicts or financial disclosures.

Financial disclosure: None declared.

Conflicts of interest: None declared.

Guideline Status

This is the current release of the guideline.

This guideline updates a previous version: Mehta NM, Compher C, American Society for Parenteral and Enteral Nutrition Board of Directors. A.S.P.E.N. clinical guidelines: nutrition support of the critically ill child. JPEN J Parenter Enteral Nutr. 2009 May-Jun;33(3):260-76. [65 references]

This meets NGC's 2013 (revised) inclusion criteria.

Guideline Availability

Available from the Journal of Parenteral and Enteral Nutrition Web site .

Availability of Companion Documents

The following is available:

> Clinical guidelines for the use of parenteral and enteral nutrition in adult and pediatric patients: applying the GRADE system to development of A.S.P.E.N. clinical guidelines. JPEN J Parenter Enteral Nutr. 2012 Jan;36(1):77-80. Available from the Journal of Parenteral and Enteral Nutrition Web site .

Patient Resources

None available

NGC Status

This NGC summary was completed by ECRI Institute on January 14, 2013. The information was verified by the guideline developer on February 1, 2013. This NGC summary was updated by ECRI Institute on March 21, 2018. The information was verified by the guideline developer on April 5, 2018.

This NEATS assessment was completed by ECRI Institute on April 5, 2018. The information was verified by the guideline developer on April 5, 2018.

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